

## REMARKS

Reconsideration and allowance are respectfully requested in view of the foregoing amendments and the following remarks:

Claims 1, 2, 4, 5, 7, 8, 10-16, and 18-21 are pending in this application.

Claims 11 and 13 have been amended.

3, 6, 9, 17 +

### In the Specification:

Applicant has amended the specification at page 4, lines 18-27. A single word has been amended in this paragraph to correct a typographical error. Applicant respectfully submits that no new matter has been added.

### Regarding the § 112 Rejection:

Claim 3 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

Applicant respectfully submits that claim 3 was cancelled by the Applicant in the previous amendment dated September 13, 2002. Applicant respectfully submits that the § 112 rejection is moot and respectfully requests that this rejection be withdrawn.

### Regarding the Allowed Claims:

Applicant appreciates the Examiner's indication that claims 15, 16 and 18 are in condition for allowance.

### Regarding the § 102 Rejection:

Claims 1, 2, 4, 5, 7, 8, 10, 14 and 19 were rejected under 35 U.S.C. § 102(b) as being anticipated by Abrams et al (U.S. Patent No. 3,981,542).

Applicant respectfully traverses this rejection.

MPEP § 706.02 states that “For anticipation under 35 U.S.C. § 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present.”

MPEP § 2131 states “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”

*Verdegaal Bros. v. Union Oil Company of California*, 814 F2nd 628, 631, 2 USPQ 2nd 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the ...claim.” *Richardson v. Suzuki Motor Co.*, 868 F2nd 1226, 1236, 9 USPQ 2nd 1913, 1920 (Fed. Cir. 1989). “The elements must be arranged as required by the claim.”

Applicant respectfully submits that the Abrams et al reference does not contain every element recited in the rejected claims, in as complete detail as is contained in the claim or arranged as recited in the claim. Applicant submits that Abrams et al. does not provide a CPU (Central Processing Unit) as required by the pending claims. Indeed, Abrams provides an analog circuit which is not inherently the same as a digital CPU. Furthermore, the Examiner states that recitations of “additional voltage” and “standard” are very general recitations readable on the operation of the electric trailer brakes 19 of Figures 1-3 of Abrams et al. Applicant has done a thorough word check of the Abrams et al. specification and claims and could not find the words “additional” and “standard voltage” used in conjunction with the word “voltage” in the specification. There was some discussion about additional current, but that is about it. Applicant further points out that Abrams et al. does not anticipate a voltage booster which provides voltage that is boosted above the voltage of the providing battery to the brake activator. As such, Applicant respectfully submits that the Abrams et al. reference cannot anticipate the rejected claims 1, 2, 4, 5, 7, 8, 10, 14, and 19 because Abrams does not teach or anticipate each and every

element either expressly or inherently as set forth in those claims. Applicant respectfully requests that the § 102 rejection be withdrawn.

Regarding the § 103 Rejection:

Claims 11, 12, and 21 were rejected under 35 U.S.C. § 103(a) as being rendered obvious by Abrams et al. in view of Rossigno (U.S. Patent No. 3,790,807).

Applicant respectfully points out that the Federal Circuit requires that some motivation or suggestion must be found in the prior art or other evidence of record that would have lead one of ordinary skill in the art to produce the claimed invention in order to properly establish a *prima facie* case of obviousness. Applicant respectfully submit that a *prima facie* case of obviousness has not been made. The CCPA explained how it would evaluate a *prima facie* case of obviousness in *In re Clinton*, 527 F2nd 1226, 188 USPQ 365 (CCPA 1976). The *In re Clinton* court required that first one must look at the references to determine whether “the references by themselves...suggest doing what the inventor has done.” The court next considered whether a person of ordinary skill in the art would, based on the cited art, have had sufficient basis for the required expectation of success. Applicant respectfully points out that Abrams et al in view of Rossigno do not teach, allude to, or render obvious anything similar to using a CPU. Furthermore, Rossigno teaches an indicator light 170 not a display. It would be understood by one of ordinary skill in the art and is supported in the present specification that a “display” provides alpha numeric characters that can be viewed by a user. Applicant respectfully submits that a *prima facie* case of obviousness has not been presented with respect to claims 11, 12, and 21.

Applicant has amended claim 11 to make it clear that the display is an alpha numeric display. Applicant respectfully requests that § 103 rejection be withdrawn.

Claims 13 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Abrams et al in view of Hubbard (U.S. Patent No. 3,823,985). Applicant respectfully points out that, as above, the Examiner has not presented a *prime facie* case of obviousness. Hubbard, like Abrams et al, does not teach, allude to or render obvious the use of a CPU with the described brake system. As such, Hubbard does not alleviate the inadequacies of Abrams et al. Applicant respectfully submits that a *prime facie* case of obviousness for claims 13 and 20 has not been presented and respectfully requests that the § 103 rejection be withdrawn.

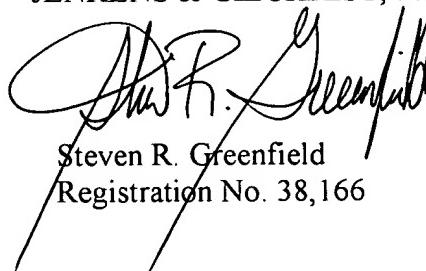
Furthermore, Applicant respectfully points out that Hubbard does not teach, allude to, render obvious or indicate that the manual control 24 for the electric trailer brakes allows a user to manually provide variable braking.

Should the Examiner have any further questions or comments facilitating allowance, the Examiner is invited to contact Applicant's representative indicated below to further prosecution of this application to allowance and issuance.

In view of the above, it is believed that this application is in condition for allowance, and such a Notice is respectfully requested.

Respectfully submitted,

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**EXHIBIT "A" - SPECIFICATION MARKED TO SHOW CHANGES**

The exemplary intelligent brake controller continuously monitors towing vehicle master cylinder pressure and uses this information to control the towing vehicle brakes. The intelligent brake controller of the invention does this by monitoring a pressure signal from a pressure sensor. When the intelligent brake controller senses a pressure increase in the towing vehicle master cylinder due to the application of the [towed] towing vehicle brakes, the intelligent brake controller sends a signal to the towed vehicle brakes to start applying the towed vehicle brakes. The intelligent brake controller modulates the signal sent to the brakes such that the towed vehicle brakes are applied in direct proportion to the amount of brake application in the towing vehicle. In this way the towed vehicle brakes will be applied in the same manner and at the same time as brakes of the towing vehicle.

**EXHIBIT 'B' - CLAIMS MARKED TO SHOW CHANGES**

1           11. (Amended) The brake controller system according to claim 1 further comprising:  
2                 [a] an alpha numeric display on a front face of said brake controller unit and in  
3 communication with said CPU for use as a visual indicator to an operator.

1           13. (Amended) The brake controller system according to claim 1 further comprising:  
2                 a manual [thumb] sliding brake switch on brake controller unit for manually and  
3 variably operating said brakes.

**EXHIBIT "C" - PENDING CLAIMS**

- 1        1. ( Amended)      A brake controller system comprising:
  - 2                  brakes located on a towed vehicle;
  - 3                  a brake activator for applying force to said brakes;
  - 4                  a brake control unit in communication with said brake activator, said brake
  - 5                  control unit having a CPU, said brake control unit adapted to receive electrical energy from a
  - 6                  battery;
  - 7                  voltage regulation circuitry in electrical communication with said brake control
  - 8                  unit;
  - 9                  said CPU in electrical communication with a bus that is in communication with at
  - 10                 least said brake activator such that said CPU provides a variable brake activation signal to said
  - 11                 brake activator;
  - 12                 a pressure sensor for providing pressure information to said CPU, said pressure
  - 13                 sensor measuring a pressure within a master brake cylinder of a towing vehicle; and
  - 14                 a voltage booster adapted to receive electrical energy from said battery and
  - 15                 provide boosted voltage to said brake activator.

- 1        2.      The brake controller system according to claim 1 wherein said brakes are electric
- 2      brakes.

- 1        4.      The brake controller system according to claim 1 wherein:
  - 2                 said brake activator is comprised of magnets; and
  - 3                 a current sensor for maintaining constant amperage to the towed vehicle brakes.

1           5. The brake controller system according to claim 4 wherein:  
2                 said CPU adjusts a signal for brake activation, based at least partially on data  
3 from said current sensor.

1           7. The brake controller system according to claim 1 wherein:  
2                 wherein said brake control unit is located within a towing vehicle.

1           8. The brake controller system according to claim 1 wherein:  
2                 said bus communicates said CPU with brake lights on said towing vehicle.

1           10. The brake controller system according to claim 1 wherein:  
2                 said bus is a brake wire that receives multiplexed signals.

1           11. (Amended) The brake controller system according to claim 1 further comprising:  
2                 an alpha numeric display on a front face of said brake controller unit and in  
3 communication with said CPU for use as a visual indicator to an operator.

1           12. The brake controller system according to claim 1 further comprising:  
2                 a control panel on said brake controller unit comprising an adjust selection display  
3 down button, and adjust selection display up button, an enter selection displayed button and a  
4 scroll menu button.

1           13. (Amended) The brake controller system according to claim 1 further comprising:  
2                         a sliding brake switch on brake controller unit for manually and variably  
3                         operating said brakes.

1           14. (Amended) A method for operating a brake controller system comprising:  
2                         receiving, by a CPU, a pressure signal indicating an amount of pressure in a  
3                         master brake cylinder of a towing vehicle;  
4                         signaling a voltage booster, by said CPU, to supply additional voltage above a  
5                         towing vehicle standard voltage; and  
6                         actuating the towed vehicle brakes.

1           15. (Amended) A method for operating a brake controller system for a towed  
2                 vehicle comprising:

3                         sensing brake fluid pressure within a towing vehicle's master brake cylinder;  
4                         sensing current in an electric brake system on said towed vehicle;  
5                         calculating with a brake controller unit the appropriate amount of brake force to  
6                         be applied by a brake activator;  
7                         determining, by said CPU, whether a voltage booster is required to supply  
8                         additional voltage to said towed vehicle's electric brake system;  
9                         actuating said towed vehicle's electric brakes without actuating said towing  
10                 vehicle brakes by use of a manual thumb brake switch;  
11                         generating a signal from said brake controller unit that is based upon and  
12                         directly proportional to a linear position of the manual thumb brake switch; and

13 activating said brake activator with said signal; and  
14 applying an appropriate amount of brake force with an appropriate amount of  
15 voltage as directed by said brake controller unit.

1 16. (Amended) The method for operating a brake controller system according to  
2 claim 15 further comprising:

3 signaling brake lights and a brake activator with said brake controller unit over a  
4 brake line by multiplexing signals over said brake line.

1 18. The method for operating a brake controller system according to claim 15 further  
2 comprising the steps of:

3 storing data within a CPU of said brake controller system;  
4 displaying at least a portion of said data with an alphanumeric display as a visual  
5 indicator to the vehicle operator during operation of the brake controller;  
6 wherein said data is selected from a group comprising: Brake Gain; Time; Date;  
7 Last Maximum Brake; Last Maximum Stroke; Last Test: Maximum Brake; Last Test: Maximum  
8 Stroke; Truck Control: Serial Number; Truck Control: Date Manufactured; Truck Control; Born  
9 on Date; Trailer Control: Serial Number; Trailer Control: Date Manufactured; Trailer Control:  
10 Born on Date; Run Diagnostic: Test Brakes.

1 19. A trailer brake system comprising:  
2 a master brake fluid pressure sensor for measure a brake fluid pressure of a brake  
3 system in a towing vehicle and for providing a brake fluid pressure signal;

4                   a brake controller for controlling a brake activator, said brake activator being for  
5                   activating a trailer brake, said brake controller comprising a CPU for receiving said brake fluid  
6                   pressure signal and for generating a signal for said brake activator so that said trailer brake is  
7                   activated with a force related to said brake fluid pressure signal.

1                 20.      The trailer brake system of claim 19, further comprising:  
2                   a finger control for actuating said trailer brake system without actuating said  
3                   brake system of said towing vehicle, said finger control being electrically connected to said CPU,  
4                   said finger control generating a braking signal based on a movement or position of said finger  
5                   control.

1                 21.      The brake controller system of claim 19, further comprising:  
2                   a display connected to said CPU for displaying trailer brake related information to  
3                   user during operation of said trailer brake system, said trailer brake related information being at  
4                   least one of Brake Gain; Time; Date; Last Maximum Brake; Last Maximum Stroke; Last Test;  
5                   Maximum Brake; Last Test; Maximum Stroke; Truck Control; Serial Number; Truck Control;  
6                   Date Manufactured; Truck Control; Born on Date; Trailer Control; Serial Number; Trailer  
7                   Control; Date Manufactured; Trailer Control; Born on Date; and Run Diagnostic; Test Brakes.